ABSTRACT

An adaptable motion estimator architecture for low bit rate image communication 1) to be compatible with image characteristic and bit rate with a reduced hardware size and 2) to optimize performance of the motion estimator by selectively applying a search method suitable for a low bit rate image characteristic and an encoder performance.

The motion estimator multiplexes a previous search window memory data from DRAM and a current macro block data for finding motion vectors to conform to each data processing elements (PE0 – PE8) and comparatively detecting MAE (Mean Absolute Error) of each motion vector with a previous frame data and a current frame data to find a motion vector having a least MAE.

The motion estimator may be applied to an image phone which requires high encoding efficiency due to small hardware and may be applied to all video encoders conforming to H.261/H.263 and MPEG.

FIG. 4